REMARKS

Claim 47 has been cancelled. Claims 1, 6, 10, 11, 24, 28, 31, 34, 46, 48, and 49 have been amended to clarify the subject matter regarded as the invention. Claims 1 – 46, 48 and 49 are pending.

The Examiner has objected to the specification for informalities. The specification has been amended to remove the attorney docket number and to add the U.S. patent application serial number for the co-pending application. It is therefore believed that the Examiner's objection is overcome.

The Examiner has rejected claim 46 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to point out and distinctly claim the subject matter which applicant regards as the invention. Claim 46 has been amended to recite "wherein one of the plurality of input channel signals corresponds to the playback channel and wherein the signal provided to the playback channel further comprises the corresponding input channel signal." For convenience and without limitation, support may be found in Figure 9. In that figure, summation block 903 receives as inputs the signal $LS1_{in}$ (an example of "the corresponding input channel signal") and ambience signal $LS1_{amb}$ (an example of the "extracted and combined identified corresponding portions") and outputs the combined signal $LS1_{out}$. Amended claim 46 is believed to distinctly point out and claim the subject matter sought to be patented.

The Examiner has rejected independent claims 1, 31, 48, and 49 under 35 U.S.C. 102(b) as being anticipated by Avendano et al.

The rejection is respectfully traversed. Independent claims 1, 31, 48, and 49 have been amended to recite, "providing at least the modified portions to at least one of the corresponding playback channels" where "there are corresponding playback channels for the plurality of channel signals." For convenience and without limitation, support may be found in Figure 3A. In the embodiment of Figure 3A, the input signals $s_L(t)$ and $s_R(t)$ correspond to a left and right playback channel (e.g., left and right speakers) and what is provided to the playback channels are $\hat{s}_L(t)$ and $\hat{s}_R(t)$. Note the subscripts "L" and "R" which indicate the playback channel a given signal is associated with and/or provided to. In Figure 1 of Avendano et al., a stereo signal is received but there are four playback channels. The received stereo signals $s_1(t)$ and $s_2(t)$ are

passed *unmodified* to the front speakers and the ambience extracted signals $a_1(t)$ and $a_2(t)$ are passed to the rear speakers. The subscripts in Avendano et al. do not use "L" and "R," but the "stereo audio is mixed with a very particular listening setup in mind, which consists of a pair of loudspeakers placed symmetrically in front of the listener." (Page 1957, left column, lines 23 – 26) Avendano et al. also say, "[i]n this study we do not discuss how to derive these front channel signals, but we assume that for a listener located at the 'sweet spot', the frontal stereo image is identical to the original stereo recording." (Page 1957, right column, lines 11 – 14) This is not "providing at least the modified portions to at least one of the corresponding playback channels" "where there are corresponding playback channels for the plurality of channel signals" as recited in claims 1, 31, 48, and 49. It is therefore believed that claims 1, 31, 48, and 49 are allowable.

Claims 2 – 30 and 32 – 33 depend from claims 1 and 31 (respectively) and are believed to be allowable for the same reasons described above.

The Examiner has rejected independent claim 34 under 35 U.S.C. 103(a) as being anticipated by Avendano et al. in view of Fincham.

The rejection is respectfully traversed. Claim 34 has been amended to recite "combining the extracted portions, including: determining the magnitude of the respective portions of said input channel signals that are not correlated or are only weakly correlated; taking the absolute difference of the magnitude values; and applying a phase to the result of the absolute difference." For convenience and without limitation, one embodiment is shown in Figure 8. Avendano et al. disclose using the coherence function $\Phi(m,k)$ to obtain an ambience signal (page 1959, left column, lines 23 – 27). In Figure 11 of Fincham, block 1140 subtracts the right surround signal 1122 from the left surround signal 1121. Neither Avendano et al. nor Fincham (alone or in combination) disclose "determining the magnitude of the respective portions of said input channel signals that are not correlated or are only weakly correlated; taking the absolute difference of the magnitude values; and applying a phase to the result of the absolute difference." It is therefore believed that amended claim 34 is allowable.

Claims 35 – 46 depend from claim 34 and are believed to be allowable for the same reasons described above.

The foregoing amendments are not to be taken as an admission of unpatentability of any of the claims prior to the amendments.

On November 15, 2004 a request for correction of inventorship under 37 CFR 1.48(a) and accompanying documents were submitted. A decision in this matter is respectfully requested. If the request for correction of inventorship is granted, please acknowledge the addition of Jean-Marc Jot as an inventor in the next Office communication.

Reconsideration of the application and allowance of all claims are respectfully requested based on the preceding remarks. If at any time the Examiner believes that an interview would be helpful, please contact the undersigned.

Respectfully submitted,

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Laura Ing
Registration No. 56,859
V   408-973-2581
F   408-973-2595

VAN PELT, YI & JAMES LLP
10050 N. Foothill Blvd., Suite 200
Cupertino, CA 95014